

Attorney Docket No.: 051480-5028

Application No.: 09/640,552

Page 3 of 11

IN THE CLAIMS:

1. (Original) A device for identifying authentic information and enabling an action, comprising:
- a) a base unit and a key unit transmitting information to the base unit, the base unit detecting the information and comparing it with predetermined information, the base unit enabling the action when the detected information matches the predetermined information;
 - b) the base unit and the key unit include respective accurately-timed digital generators running essentially synchronously with respect to one another and generating digital output information that changes at predetermined time intervals;
 - c) the key unit combining the digital information of the key unit digital generator with a stored identification code in accordance with a predetermined coding rule to form a coded information item;
 - d) the base unit using the predetermined coding rule to code the predetermined information with the digital information of the base unit digital generator to form a predetermined coded information item, and comparing the predetermined coded information item with the coded information item communicated by the key unit, the base unit enabling the action when the coded information item communicated matches the predetermined coded information item;
 - e) the base unit transmitting a radio-frequency carrier signal;
 - f) the key unit including a controllable electronic switch switching an antenna between an essentially matched state and a mismatched state in accordance with the coded information item and the antenna reflecting the received radio-frequency carrier signal in accordance with the time changing digital coded information; and
 - g) the base unit receiving and evaluating the reflected signal.
2. (Original) The device as claimed in claim 1, wherein the base unit includes a central evaluating and control unit driving a radio-frequency generator, the radio-frequency generator generates the radio-frequency carrier signal that is connected to an antenna by a power amplifier.
3. (Original) The device as claimed in claim 2, wherein the evaluating and control unit drives the frequency generator in such a manner that the radio-frequency carrier signal is frequency-modulated with a triangular function.

Attorney Docket No.: 051480-5028
Application No.: 09/640,552
Page 4 of 11

4. (Currently Amended) The device as claimed in claim 2, wherein the radio-frequency carrier signal is supplied to the antenna by a circulator, the circulator supplying essentially all power of the radio-frequency carrier signal of the antenna.
5. (Original) The device as claimed in claim 4, wherein the base unit includes a demodulator unit supplied by the circulator with a signal received by the antenna, the demodulator receiving essentially all power of the signal received by the antenna, and the demodulator unit supplying an output signal to the central evaluating and control unit.
6. (Original) The device as claimed in claim 5, wherein the demodulator unit is additionally supplied with the carrier signal of the radio-frequency generator and the demodulator unit correlates the carrier signal with the signal received by the antenna for the purpose of demodulation.
7. (Original) The device as claimed in claim 5, wherein the evaluating and control unit determines a distance between the base unit and the key unit from the output signal from the demodulator unit.
8. (Original) The device as claimed in claim 7, wherein the base unit includes a plurality of antennas, the base unit determining the distance between the key unit and each of the pluralities of antennas, and determining from each distance a position of the key unit with respect to the base unit to enable the action.
9. (Original) The device as claimed in claim 3, wherein the evaluating and control unit separates a number of superimposed signals from a plurality of the key units at different distances. the evaluating and control unit separating the superimposed signals from one another by evaluating a displacement spectra due to the different distances from the base unit and evaluating collisions of the received information items.
10. (Original) The device as claimed in claim 2, wherein a modulator is provided between the radio-frequency generator and the antenna, the modulator receiving a data signal from the evaluating and control unit.
11. (Original) The device as claimed in claim 1, wherein the key unit includes a central evaluating and control unit controlling the key unit digital generator, an identification code memory.

Attorney Docket No.: 051480-5028
Application No.: 09/640,552
Page 5 of 11

a coding unit, and a ring-connected shift register, the shift register being loaded at predetermined time intervals with a different coded information item generated by the coding unit using the digital information from the key unit digital generator and contents of the identification code memory, and the shift register cyclically reading out the different coded information items.

12. (Currently Amended) A [The] device [as claimed in claim 11, wherein] for identifying authentic information and enabling an action, comprising:

a) a base unit and a key unit transmitting information to the base unit, the base unit detecting the information and comparing it with predetermined information, the base unit enabling the action when the detected information matches the predetermined information;

b) the base unit and the key unit include respective accurately-timed digital generators running essentially synchronously with respect to one another and generating digital output information that changes at predetermined time intervals;

c) the key unit combining the digital information of the key unit digital generator with a stored identification code in accordance with a predetermined coding rule to form a coded information item, the key unit including:

a central evaluating and control unit controlling the key unit digital generator;

an identification code memory;

a coding unit; and

a ring-connected shift register, the shift register being loaded at predetermined time intervals with a different coded information item generated by the coding unit using the digital information from the key unit digital generator and contents of the identification code memory, and the shift register cyclically reading out the different coded information items, the cyclical readings output from the shift register are supplied as an input signal to a frequency modulator, the frequency modulator generating an auxiliary-carrier frequency which is a multiple below the frequency of the radio-frequency generator of the base unit and a multiple above the cycles of the shift register, and the auxiliary-carrier frequency is supplied to the controllable electronic switch;

d) the base unit using the predetermined coding rule to code the predetermined information with the digital information of the base unit digital generator to form a predetermined coded information item, and comparing the predetermined coded information item with the coded

Attorney Docket No.: 051480-5028
Application No.: 09/640,552
Page 6 of 11

information item communicated by the key unit, the base unit enabling the action when the coded information item communicated matches the predetermined coded information item;

e) the base unit transmitting a radio-frequency carrier signal;

f) the key unit including a controllable electronic switch switching an antenna between an essentially matched state and a mismatched state in accordance with the coded information item, and the antenna reflecting the received radio-frequency carrier signal in accordance with the time changing digital coded information; and

g) the base unit receiving and evaluating the reflected signal.

13. (Original) The device as claimed in claim 12, wherein the base unit includes a demodulator unit supplies an output signal to an auxiliary modulator unit in the base unit, the auxiliary demodulator unit demodulating the output signal containing the auxiliary-carrier frequency and supplying coded information to the base unit evaluating and control unit.

14. (Original) The device as claimed in claim 1, wherein the base unit transmits the radio-frequency carrier signal continuously.

15. (Original) The device as claimed in claim 1, wherein the base unit transmits the radio-frequency carrier signal at predetermined time intervals.

16. (Original) The device as claimed in claim 1, wherein the base unit transmits the radio-frequency carrier signal following a request signal.

17. (Original) The device according to claim 10, wherein the modulator is a multiplier.